REMARKS

Claims 1-21 are pending in this application. By this Amendment, Claims 1-15 are amended and Claims 16-21 added. As support for the amendments is provided in the originally filed application, Applicant respectfully submits that no new matter is presented herein.

Abstract

The Office Action objected to the originally filed Abstract. Enclosed herein is a Substitute Abstract which addresses the basis for the objection. Withdrawal of the objection is respectfully requested.

Claim Rejections – 35 U.S.C. §112

Claims 2, 4-7, 10 and 14-15 are rejected under 35 U.S.C. §112, second paragraph. The claims have been amended in a manner believed to be responsive to the rejection. Withdrawal of the rejection is respectfully requested.

Double Patenting Rejection

Claims 1, 3 and 10-15 are provisionally rejected under 35 U.S.C. §101, as claiming the same invention as Claims 1, 4-8 and 11 of co-pending Application No. 10/744,008. Applicant respectfully traverses the rejection.

Applicant respectfully points out that independent Claim 1 of co-pending Application No. 10/744,008 recites a sliding element for seals including a carbon matrix formed by firing a matrix comprising 25 to 75 weight % carbon aggregate and 20 to 50 weight % thermosetting synthetic resin binder, wherein the sliding element further includes ***isolatedly scattered spherical pores inside the carbon matrix*** and ***having***

a diameter in a range of from 1 to 100 μm and concaves formed on a carbon sliding face.

Applicant respectfully points out that independent Claim 8 of co-pending Application No. 10/744,008 recites a process of manufacturing sliding element for seals, comprising the steps of blending source material mainly comprised of 25 to 75 weight % carbon aggregate and 20 to 50 weight % thermosetting synthetic resin binder ***with 1 to 30 weight % spherical resin, which is a resin having a spherical form and different from the thermosetting resin binder***, and after mixing, kneading, and molding the blended material to a preform, firing the preform to a predetermined temperature.

Applicant further notes independent Claims 1 and 12 of the present invention recite carbonaceous carbon fibers free of surface treatment. Claims 1 and 8 of co-pending Application No. 10/744,008 do not require or recite such a feature, expressly or inherently. Pending independent Claims 1 and 12 do not recite or otherwise require scattered spherical pores, let alone pores with a particular sized diameter, and/or a spherical resin that is different from the thermosetting resin. Claims 1 and/or 8 of co-pending Application No. 10/744,008 recite or otherwise require such feature(s). In view of the above, Applicant respectfully submits that the pending claims of the instant application are not coextensive in scope with the claims of co-pending Application No. 10/744,008.

Accordingly, Applicant respectfully requests withdrawal of the rejection.

Claim Rejections – 35 U.S.C. §102

Claims 1-11 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,538,649 to Demendi et al. (Demendi). Applicant respectfully traverses the rejection.

Claim 1 recites a sliding element for seals including a fired preformed material including 25 to 75 weight % carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon and 20 to 50 weight % synthetic resin as a binder, wherein carbonaceous carbon fibers free of surface treatment are blended within the range of 5 to 25 weight % and inside a carbon matrix, the ***carbon fibers being randomly scattered within the carbon matrix in which resin is not included***.

Demendi discloses a composition of matter for use in tribological applications, such as in mechanical seals, which provides good durability and wear characteristics. The material is used in the "softer" one of two relatively sliding members which are in, or may come into, contact with each other during the relative rotation of one of the members relative to the other. The material is a carbon or carbonaceous formed material, such as is normally used in the manufacture of a primary seal ring in a mechanical seal, and comprises an additive compound which contains at least one compound from a group consisting of neodymium fluoride, praseodymium fluoride, gadolinium fluoride and lanthanum fluoride (see the Abstract of Demendi). However, Demendi is totally silent as to the presence of carbon fibers being randomly scattered within the carbon matrix in which the synthetic (binder) resin is not included. In fact,

Applicant respectfully submits Demendi fails to disclose or suggest of any such carbon fibers.

Claims 12-15 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,990,222 to Watada et al. (Watada). Applicant respectfully traverses the rejection.

Claim 12 recites a process of manufacturing a sliding element for seals, comprising the steps of: blending a source material comprising 25 to 75 weight % carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon and 20 to 50 weight % synthetic resin as a binder with 5 to 25 weight % carbonaceous carbon fibers free of surface treatment; mixing, kneading and molding the blended material to a perform; and firing the preform at a predetermined temperature.

Watada discloses a process for producing a resin composite having a blend comprising 10 to 70 vol-% of thermosetting resin and the remainder comprising the required fillers. If the amount of thermosetting resin is less than 10 vol-%, the strength of the resulting resin composite is low and thus not practical. On the other hand, if the amount of resin exceeds 70 vol-%, the above dimensional accuracy cannot be obtained due to occurrence of softening or melting of the resin at the time of thermal hardening. Moreover, the amount of resin incorporated is preferably in the range of 10 to 40 vol-% (see column 4, line 60 to column 5, line 3 of Watada). However, Watada fails to teach or suggest the resinous binder having or comprising 5 to 25 of the binder's weight % being carbonaceous carbon fibers that free of surface treatment.

To qualify as prior art under 35 U.S.C. §102, each and every feature of a rejected claim must be taught or suggested by the applied art of record. As explained above, Applicant respectfully submits Demendi and Watada do not disclose or suggest each and every feature recited by Claim 1 and Claim 12, respectively. Therefore, Applicants respectfully submit that Claims 1 and 12 are not anticipated by or rendered obvious in view of Demendi and Watada and should be deemed allowable.

Claims 2-11 and 16-18 depend from Claim 1. Claims 13-15 and 19-21 depend from Claim 12. It is respectfully submitted that these dependent claims be deemed allowable at least for the same reasons Claims 1 and 12, respectively, are allowable as well as for the additional subject matter recited therein.

Applicant respectfully requests withdrawal of the rejections.

Conclusion

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding objection and rejections, allowance of Claims 1-21, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 108179-00036**.

Respectfully submitted,
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Enclosure: Extra Claims Transmittal

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